

## FARM RESEARCH NEEDS - NOW AND THE FUTURE

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Agriculture research is a necessity that all farmers use and will continue to use if they expect to remain competitive in the ever changing world grain and livestock markets. That is a pretty strong opening statement but this one that I believe most farmers will agree with. Research has enabled us to increase our production or efficiency of production when price margins have been shrinking and input costs have been rising. As an example:

Research has helped us on our farm to increase production by at least 25% during a time when prices for marketable products have either remained constant (beef) or fallen by 15% (grain) and the costs of inputs have increased by 30-40%. Yet we continue to farm, producing cheap products.

For discussion purposes I would like to break research down into 3 categories that I as a farmer recognize. I would also like to add to these categories the group in society that I feel receives the largest payout or benefit from this research. I will then cover each of the areas individually.

i) Theoretical or "textbook" research, e.g. biotechnology. The consumer will ultimately receive the highest benefits from the research.

ii) Applied research, e.g. Crop Development Centre, Institute of Pedology, Part of Agriculture Canada. In this type the farmer initially receives the benefit but the consumer is the ultimate beneficiary.

iii) Demonstration research, e.g. Farmlab. The producer receives the most direct benefit but the consumer also receives payouts in cheaper food (greater purchasing power) or byproducts.

I realize that it isn't this simplistic in the research world and that it would be very difficult to pigeonhole individual research projects but in real terms I feel that these three categories can be used to describe the research currently being conducted.

In addition I do not want to leave the impression at this time that I fully agree with all the research in these categories nor that I feel all these categories should be be financed in the same manner. I would like to emphasize that I feel the largest benefactor from the current Agricultural Research, particularly class (i) and (ii), is the consumer (local or foreign) and this leaves us with a lot of implication as to who should pay the research cost directly. I may be looking at this to simplistically but if research helps me as a, farmer I should be realizing an additional profit, pay more taxes, and therefore pay for the research. If the research is not helping me directly, but rather helping the consumer, then the consumer should be able to pay. By consumer I mean the local person (as in the two price systems in Canada for wheat) or the foreign importer of agricultural products.

Let us look at each of the research areas individually.

i) **Theoretical Research** - This is the area that farmers least understand and can usually realize the least initial direct benefits. That is not to say that this is not important research as this is often the first step in making a new discovery or breakthrough. This is usually very expensive research in terms of equipment and manpower and is often part of ongoing research programs, e.g. Agriculture Canada, University programs. This is an area that farmers have a hard time relating to but within this area a few of the areas I would like to see more work on are:

- more on the economics of grain handling systems,  
i.e. direct cost-benefits, effects on land values
- economic effects of operating capital
- biotechnology - waste production usages, disease, insect control, biological weed control, livestock health, V.I.D.O.

ii) **Applied Research** - This area producers direct implications for farms and economic returns to the farmer and consumer.

At this point I would like to re-emphasize the benefits of research in terms of who receives the benefits. In 1972 I bought a 1/4 of beef for \$2.00/lb, cut and wrapped, for a total of \$234.00. On Saturday I bought a 1/4 of beef for \$1.99/lb, cut and wrapped, for a total of \$234.00. On the other hand, wages I made in 1972 were about \$1,000.00/month and in 1982 were at \$3,400.00. If I had remained in the working field my wages as a consumer would still be about \$3,400.00/month. Who has benefited from livestock research, the farmer or the consumer.

Similarly in 1972 very few farmers I knew used operating loans to manage their farms, now practically all I know use and have to use an operating loan. My purchasing power as a farmer is lower. Again, who has benefited?

Returning to this applied research area, the areas I would like to see continued programs on are:

- continued upgrading of new varieties, new crops
- irrigation evaluations
- uses of lower quality crops for livestock, alcohol, or secondary industries. I am a firm believer in diversification of the operations
- extended cropping systems, fertilizer placement, chemical fallow, crop interactions
- use of every acre of land to its economic potential, e.g. salinity work

iii) **Demonstration Research** - To me this is an area that is a must for researchers as well as farmers. If it cannot be demonstrated as a valuable tool to the farming system, why is it called agricultural research? Maybe some of the research labelled as agricultural should be relabelled as consumer research.

Areas I would like to see covered:

- salinity reclamation
- extended cropping systems
- crop and/or other grain transportation benefits
- new equipment or equipment with greater efficiency

We must emphasize here that every acre of land on the farm must be in some form of economic production.

I would like to emphasize that I have tried to realize only a few projects in each area that I would like to see expanded on. These are the areas that have the greatest direct impact to me as a farmer. We must realize that each province, or area within a province, or for that matter each farm will have different expectations of research and thus a strong research program is essential.

**Summary:** With the cost-price squeeze farmers are now in, it is a natural reaction to strike out at "anything", including research, that they do not fully understand or that they preceive to be an immediate cost liability. Thus, at the present time, many farmers may preceive research as a liability, or a cost that must be justified. As a farmer myself, I hope this does not occur and I would like to emphasize that research of all types is required for us to maintain our long term productivity. Let us not forget that for every \$1 million spent in research we will receive at least that much in direct benefits and the consumer will receive substantially more. On the other hand, I do feel that the research personnel or extension people must make an effort in "selling" the practical applications of the results from the various programs. I feel that the approach of the past 5 years, like the Farmlab demonstration program, or going back 50 years to the the old research farm concept is a very important and valuable tool for reaching the farmers with research results. Without this the farming public will always queston the value of "Ivory Tower" research.